Section H

Spent Nuclear Fuel

PROJECT MANAGERS
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INTRODUCTION

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, Work Breakdown Structure (WBS) 3.2.3.

NOTE: Unless otherwise noted, all information contained herein is as of the end of September 2002.

Fiscal year (FY) to date milestone performance (EA, HQ, and RL) shows one milestone completed late and one overdue.

TOP 5 ACCOMPLISHMENTS FOR FY 2002

Fuel Movement Activities — The SNF Project shipped 92 Multi-Canister Overpacks (MCOs) containing 504.83 Metric Tons of Heavy Metal (MTHM) (9 MCOs and 115.88 MTHM during the reporting period) from K West (KW) to the Cold Vacuum Drying Facility (CVDF) during FY 2002. A total of 119 MCOs and 624.71 MTHMs have been shipped cumulatively through the end of FY 2002.

Production Improvements — Implemented process improvements and took actions to minimize production constraints at KW that has allowed the project to increase and maintain its MCO shipment average to four MCOs per week since August 26, 2002. Process improvements included CVDF process hose adjustment; end-of-batch accountability reduction; rinse and wash reductions; the simultaneous validation of heavy fuel and aluminum cans, and the reduction of inspections from 1:10 to 1:20, and then 1:40; and "witness model" improvements. Equipment reliability improvements included modifications of P2 pumps, baskets, and ultrasonic flow meter, and improvements to manipulator performance and reliability. The project continues to focus on improvements and has established a Requirements Improvement Team, which identified thirteen initiatives that can improve fuel removal and conditioning process times. The project is currently working these initiatives.

Organizational realignments to improve project effectiveness were implemented. These changes were: (1) Established a Production Control organization to facilitate detailed production and project integration and schedules; (2) realigned the maintenance organization under a new manager reporting to the project director; and (3) consolidated Project Technology, Engineering, and Nuclear Safety under one manager reporting to the project director.

Fuel Transfer System (FTS) — Activities included:

- Completed K East (KE) Basin and KW Basin Facility Modifications for FTS Cask Transportation System milestone (M-34-29). Section 1B of the Construction Completion Document was signed off as complete September 12, 2002, completing the milestone.
- Began Contractor Operational Readiness Review (ORR) on September 25, 2002.

Canister Cleaner Operations — Activities included:

- Initiated Canister Cleaner Operations (M34-06-T01) in February 2002.
- Removed a total of 839 canisters and 706 lids from the K Basins. Shipped a total of 812 canisters to the Environmental Restoration Disposal Facility (ERDF).

Site-Wide Activities — Activities included:
The project successfully completed all readiness activities necessary to begin receiving non-K Basin fuel shipments:

- The first four of six shipments of Light Water Reactor (LWR) fuel were received from the 324 Building and placed on a storage pad at the 200 Area Interim Storage Area (ISA).
- The first three of 18 shipments of Shippingport Reactor SNF were packaged and dried at T-Plant and shipped for safe storage at the Canister Storage Building (CSB).

OTHER ACCOMPLISHMENTS FOR FY 2002

Sludge Water System (SWS) — Activities included:

- Appointed Deputy Project Director for the sludge project to improve technology integration and schedule performance.
- Awarded Sludge Retrieval System (SRS) contract to AvanTech on July 25, 2002.
- Completed Sludge Transportation System (STS) 100 percent design.
- Assigned Fluor Hanford SNF Project expeditors at subcontractors to expedite fabrication and delivery of the STS casks, Large Diameter Containers (LDC) and Transport Trailers.
- Continued development of Programmable Logic Controller (PLC) software that will operate the SRS and received PLC from Fluor Federal Services on September 27, 2002.

SNF Project Quality Assurance (QA) Program — The SNF Project's QA program was assessed by DOE's National Program and received an "effective" rating for the third year in a row. No significant corrective action requests were identified as a result of the audit.

MCO and MCO Basket Fabrication Shop — Activities included:
MCO Mark IV scrap basket fabrication continued. Production continues with sufficient lead-time to ensure no interruption to the fuel packaging process. A total of 1,658 baskets have been fabricated and are ready for use. A total of 258 MCOs have been received on-site and are ready for use.

ACCOMPLISHMENTS FOR THIS REPORTING PERIOD

SWS — Activities included:

- Began receipt of Sludge Retrieval System (SRS) equipment.
- Continued installation of in-basin conduit and prefabrication of in-basin piping.

Safety

No Lost Away Workday injuries were reported within the SNF Project, thus allowing an achievement of 5.23 million safe work hours by the end of FY 2002. The project experienced an increase in OSHA Recordable cases, and in the DOE Safety Cost Index during the month of September. Efforts are currently underway to improve safety performance. Working groups have been established to develop a Project-wide Safety Improvement Plan (SIP) targeted for issuance in December 2002. A team has also been identified to develop a KW Focus Plan, which will concentrate on soft tissue injury reductions. Implementation of all recommended actions is targeted for March 31, 2003. Emphasis continues to be placed on management commitment and worker involvement utilizing the Integrated Safety Management (ISM) System.

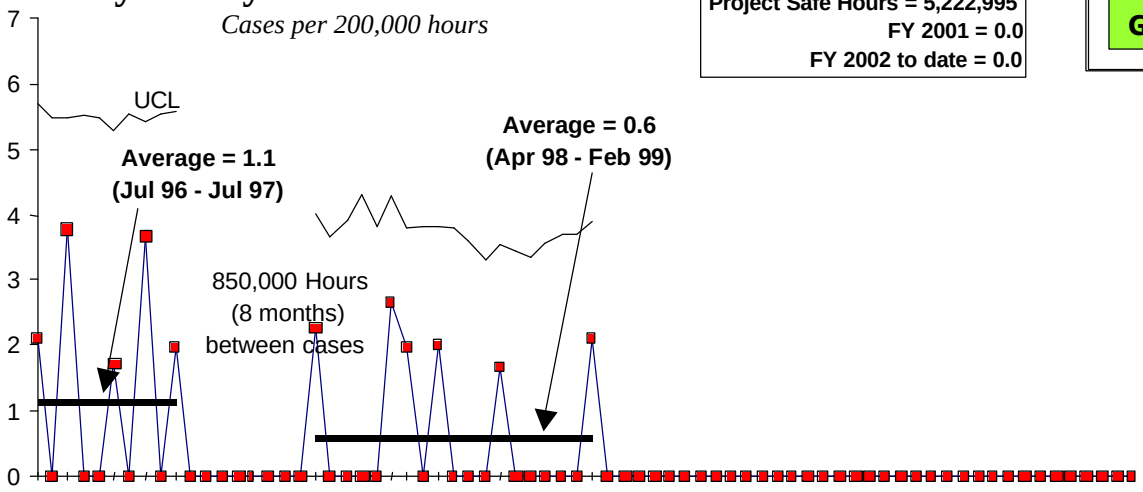
Safety (Continued)

Days Away From Work Case Rate

Cases per 200,000 hours

Project Safe Hours = 5,222,995
FY 2001 = 0.0
FY 2002 to date = 0.0

Green

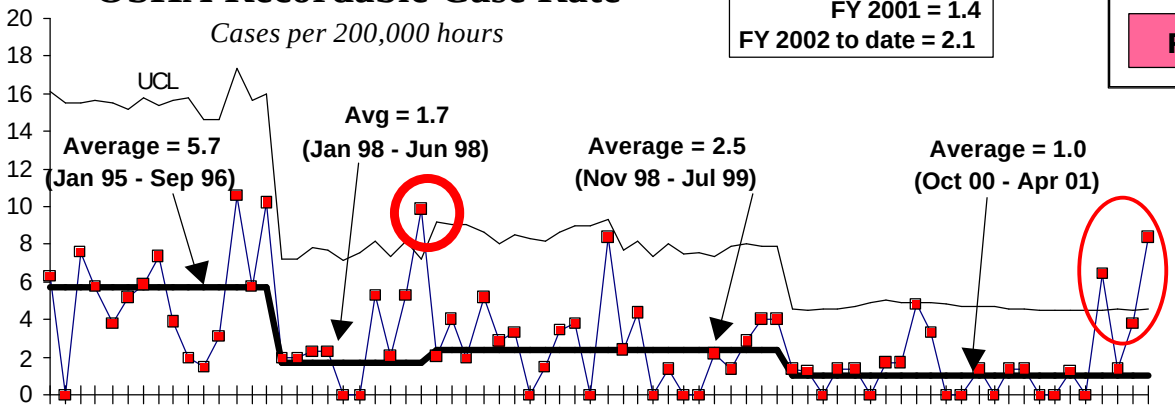


OSHA Recordable Case Rate

Cases per 200,000 hours

FY 2001 = 1.4
FY 2002 to date = 2.1

Red

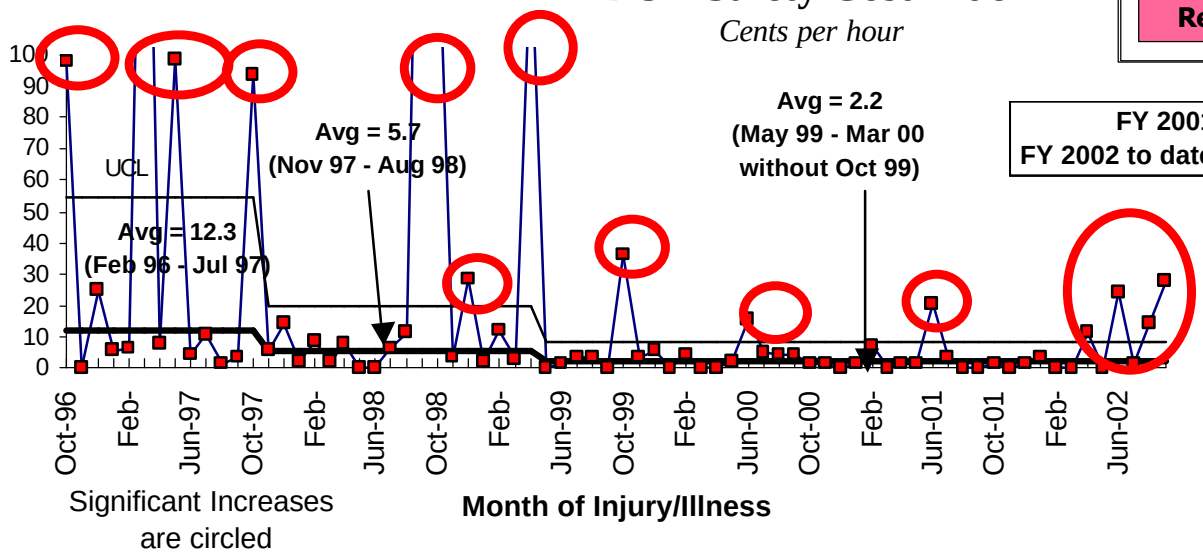


DOE Safety Cost Index

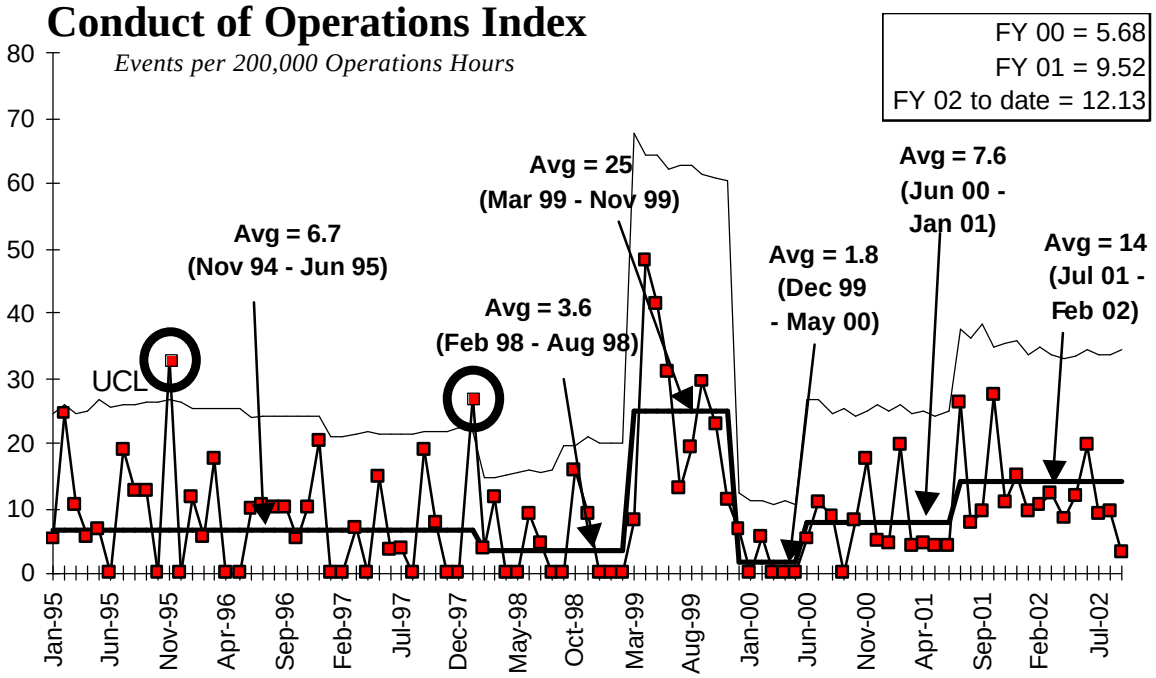
Cents per hour

Red

FY 2001 = 3.1
FY 2002 to date = 7.1



Conduct of Operations



The SNF Project continues to make progress towards actions identified in the CONOPs Improvement Plan. The project conducted a quarterly CONOPs review which indicates that personnel performance areas trending positively. Additional focus has been applied to the project's lock and tag program. The manager-in-the-field activities will focus on radiological controls due to recent contamination events.

Breakthroughs / Opportunities for Improvement

Breakthroughs

Nondestructive Examination (NDE) of Contamination in the KE Basin Walls and Floors — A significant activity necessary to deactivate the 100 Area KE Basin is to characterize the level of contamination in the basin's unsealed concrete walls and floor. This characterization data will be used as part of the technical basis to determine the methods to be applied in completing the deactivation of the basin, once the fuel and sludge have been removed.

The SNF Project will be using nondestructive (gamma scanning) techniques and detector systems, developed by the Pacific Northwest National Laboratory, to acquire data on the depth of radionuclide penetration in the basin's concrete walls and floors. This is the first time the NDE technique will be used to obtain characterization data with the facility in normal operation, with its full inventory of fuel, sludge and contaminated water. If successful, the data will be used, in conjunction with other information, to determine which deactivation methods can realistically be used to remove/reduce the radiological dose/contamination, as well as to determine which basin areas are in the greatest need of mitigation. After initial deployment in the KE Basin, the wall detector system received basin water contamination, which must be resolved before data gathering can resume. Recovery efforts have been post-poned to November 2002, due to other KE Basin priority work.

Opportunities for Improvement

Witness Model — The baseline model has been produced and used for production capability assessment. The model performed well in evaluating the knowledge of the project, critical path and in prioritizing actions to reduce the critical path length. The model was updated with additional detail to confirm the accuracy of knowledge of the project's new critical path. In view of budgetary considerations, the model will be maintained in a dormant state and updated only as necessary to ensure the project's critical path is well understood. It is not considered cost effective to continuously update and maintain the model in view of project knowledge of the critical path and actions being taken to shorten the critical path.

UPCOMING ACTIVITIES

FTS — Complete Contractor ORR by October 10, 2002.

FTS — Begin DOE ORR by October 2002.

SWS — Receive cask and container for sludge in October 2002,

SWS — Submit revised project completion schedule by October 31, 2002 (M-34-08).

FTS — Begin KE to KW fuel transfer by November 30, 2002 (M-34-17).

SWS — Install all basin systems [includes: Mechanical, electrical, crane, Closed Circuit Television (CCTV), etc.; CCTV will be last] in December 2002.

MCO Welding — Begin welding of MCOs at CSB in February 2003.

Fuel Retrieval System (FRS) — Complete construction activities for KW Basins SNF scrap removal system in February 2003.

MILESTONE ACHIEVEMENT

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-06-T01	Initiate KW Basin SNF Canister Cleaning Operations	TPA	08/31/01	3/15/02		Complete
M-34-29	Complete KE Basin and KW Basin facility modifications for AFTS casks transportation system	TPA	3/31/02	9/12/02		Complete
M-34-12-T01	Complete construction of SWS	TPA	09/30/02		12/23/02	Milestone tied to fuel transfer from KE and is not applicable. Has been submitted for deletion.
M-34-17	Initiate KE to KW fuel transfer	TPA / PI	11/30/02		11/30/02	On schedule.
M-34-18A	Complete removal of 957 MTHM of SNF from the KW Basin	All 3	12/31/02		12/31/02	Working recovery schedule; behind 16.03 MTHM or 4.5 Light MCOs or 1 week.
M-34-08	Initiate full scale KE basin sludge removal	TPA/DNFSB	12/31/02		2/13/03	Behind schedule. Tracking to initiate sludge movement 2/13/03
M-34-27-T01	Complete removal of 1252 MTHM of SNF from KW Basin	TPA	5/31/03		5/31/03	On schedule
S09-03-010	Decide treatment path for sodium removal from FFTF	TIP	09/30/03		09/30/03	On schedule
M-34-28	Complete removal of 1619 MTHM from the KW Basin	TPA	12/31/03		12/31/03	On schedule

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-25-T01	Complete transfer of KE Basin SNF to KW Basin	TPA	5/31/04		5/31/03	On schedule
M-34-18B	Complete removal of all K Basin SNF	ALL 3	7/31/04		7/31/04	On schedule
M-34-10	Complete sludge removal from K Basins.	ALL 3	8/31/04		8/31/04	On schedule
M-34-23	Start KE water removal	TPA	9/30/04		9/30/04	On schedule
M-34-09-T01	Complete K Basins rack and canister removal	TPA / PI	1/31/05		1/31/05	On schedule
M-34-24	Complete KE Basin Water removal	TPA	9/30/05		9/30/05	On schedule
M-34-21-T01	Initiate full-scale KW Basin water removal	PI	10/31/05		10/31/05	On Schedule
S06-06-006	Complete K Basin water removal	PI (Stretch)	4/30/06		4/30/06	On schedule
M-34-22	Complete KW Basin water removal	TPA / PI	8/31/06		8/31/06	On schedule
S06-06-004	Complete transition activities for CVDF and other facilities	PI	9/30/06		9/30/06	On schedule
S06-06-005	Transfer of K Basins to the River Corridor Contractor	PI (Stretch)	9/30/06		9/30/06	On schedule

NOTE: Above data includes all TPA/DNFSB/Performance Incentive milestones as included in the FH baseline, and provides Contract-to Date status.

Performance Objectives

Move Fuel Away from the River

EXPECTATION: Remove spent fuel from K Basins

Move 720.1 Metric Tons Heavy Metal from KW Basin by end of FY 2002

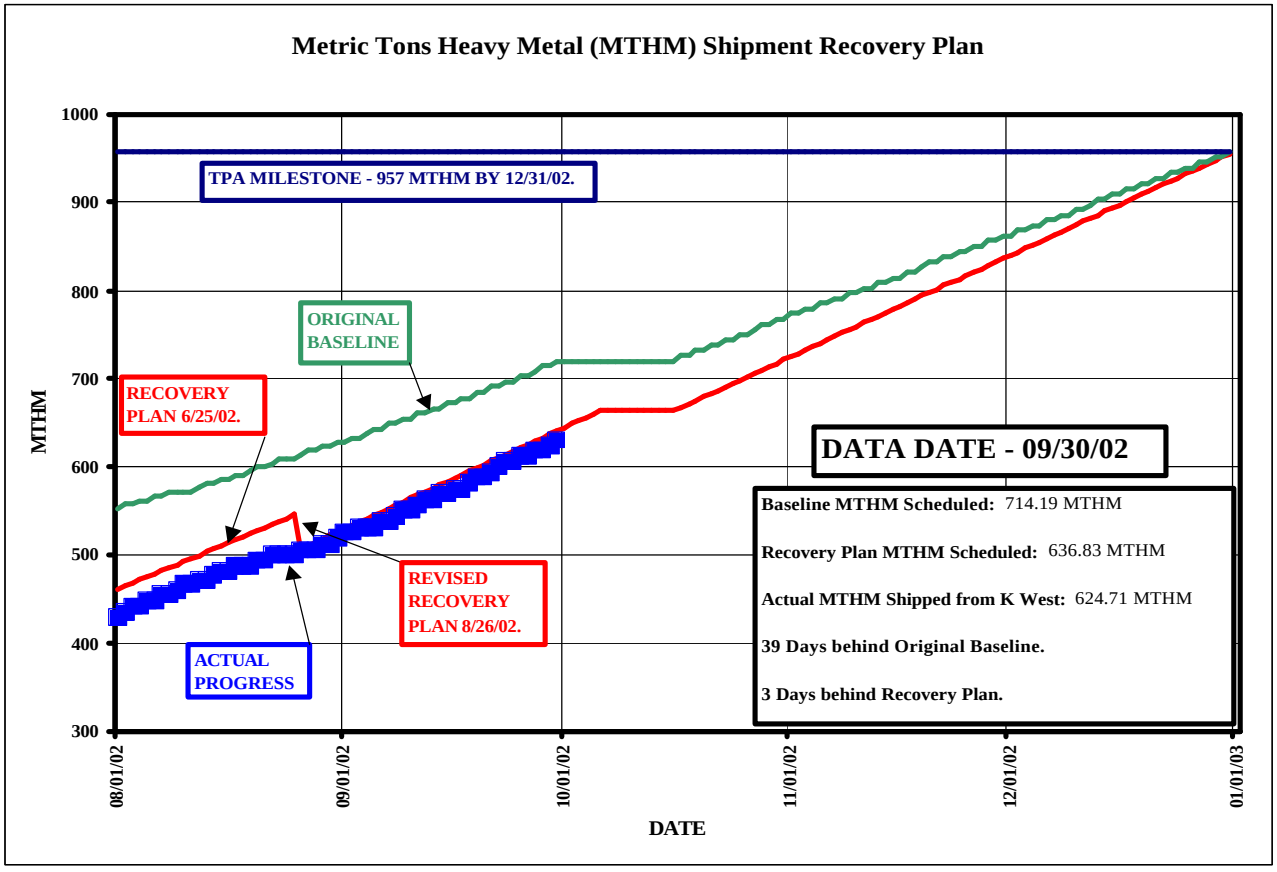
Status: A cumulative total of 119 MCOs and 624.71 MTHMs have been shipped. Currently one week and approximately 16.03 MTHM (four light MCOs) behind the August 26, 2002 Recovery Plan (39 days behind baseline schedule; recovered 23 days against baseline schedule during the last 77 days of operation) as of September 30, 2002. The project continues to work Plant Improvement Initiatives identified through the Requirements Improvement Team.

Complete construction on Fuel Transfer System by March 31, 2002

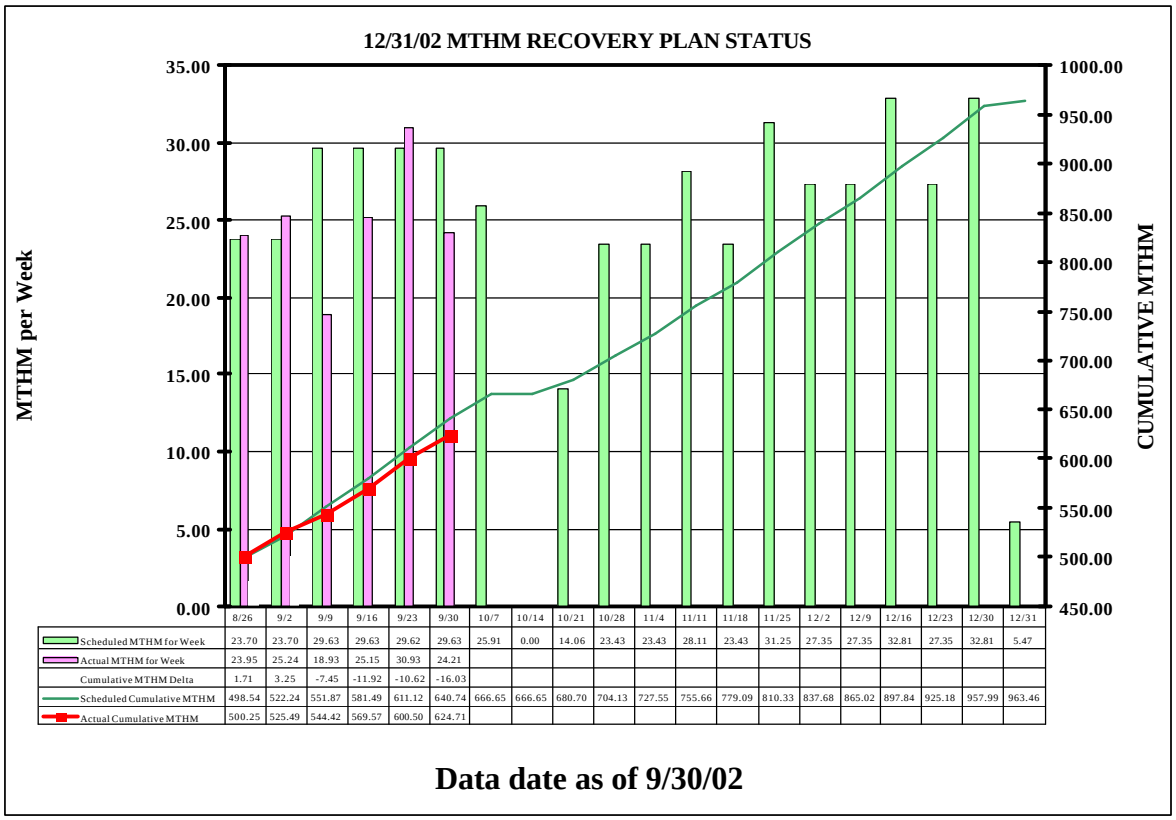
Status: Complete. Section 1B of the Construction Completion Document was signed off as complete September 12, 2002.

Commence KE to KW Fuel Transfer by November 30, 2002

Status: The contractor ORR began September 25, 2002 and will be complete October 10, 2002. DOE ORR is scheduled to commence October 28, 2002.

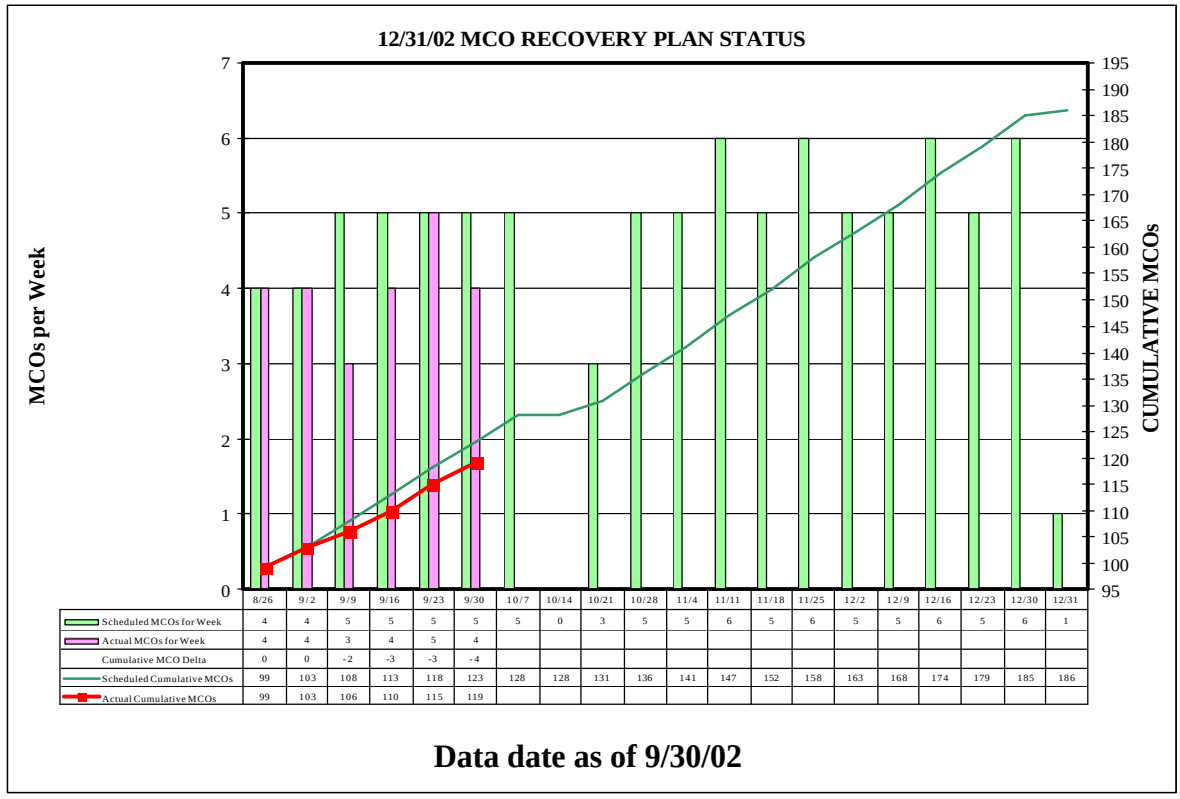


PERFORMANCE OBJECTIVES (CONTINUED)



	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23	12/30	12/31
Scheduled MTHM for Week	23.70	23.70	29.63	29.63	29.62	29.63	25.91	0.00	14.06	23.43	23.43	28.11	23.43	31.25	27.35	27.35	32.81	27.35	32.81	5.47
Actual MTHM for Week	23.95	25.24	18.93	25.15	30.93	24.21														
Cumulative MTHM Delta	1.71	3.25	-7.45	-11.92	-10.62	-16.03														
Scheduled Cumulative MTHM	498.54	522.24	551.87	581.49	611.12	640.74	666.65	666.65	680.70	704.13	727.55	755.66	779.09	810.33	837.68	865.02	897.84	925.18	957.99	963.46
Actual Cumulative MTHM	500.25	525.49	544.42	569.57	600.50	624.71														

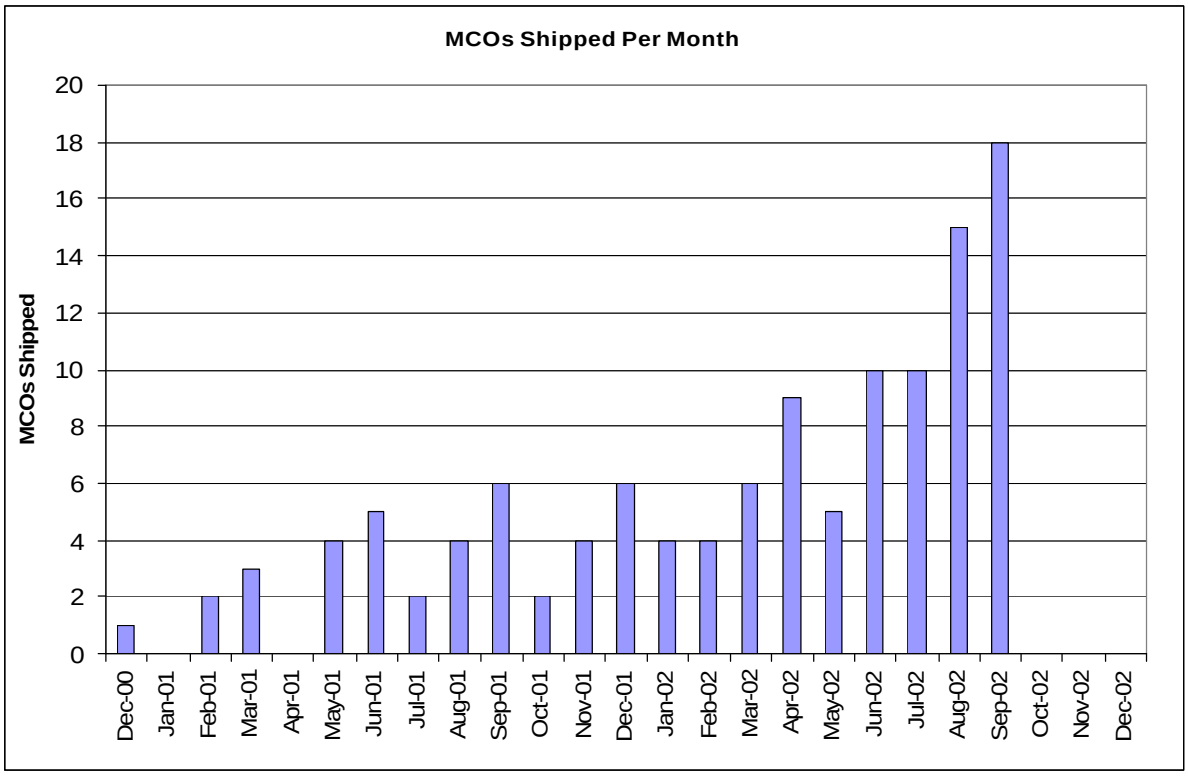
Data date as of 9/30/02

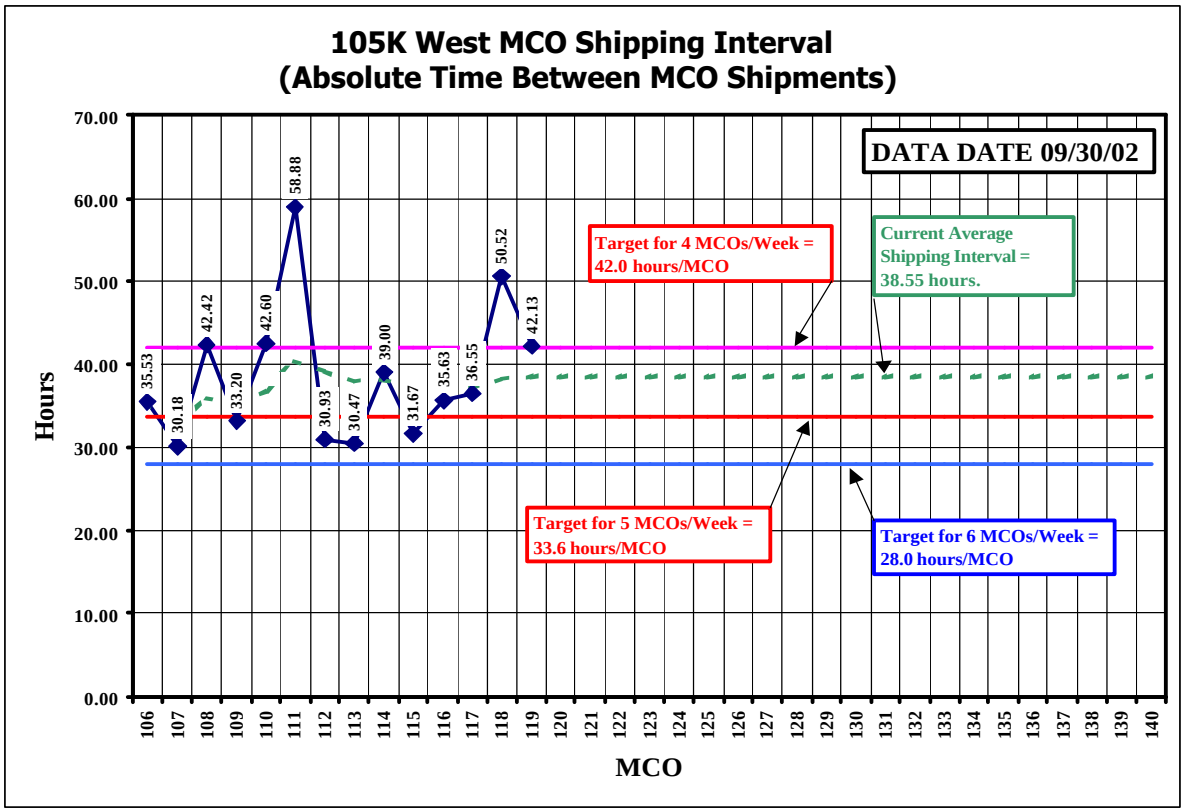


	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23	12/30	12/31
Scheduled MCOs for Week	4	4	5	5	5	5	5	0	3	5	5	6	5	6	5	5	6	5	6	1
Actual MCOs for Week	4	4	3	4	5	4														
Cumulative MCO Delta	0	0	-2	-3	-3	-4														
Scheduled Cumulative MCOs	99	103	108	113	118	123	128	128	131	136	141	147	152	158	163	168	174	179	185	186
Actual Cumulative MCOs	99	103	106	110	115	119														

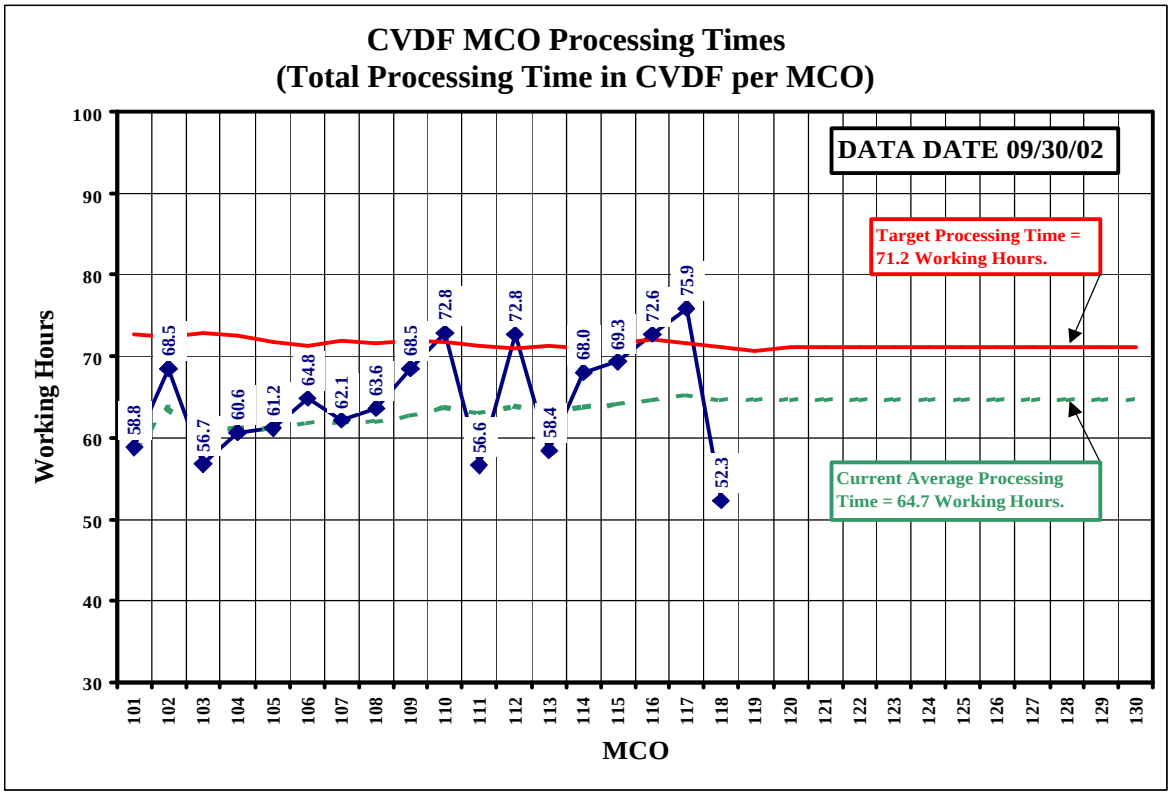
Data date as of 9/30/02

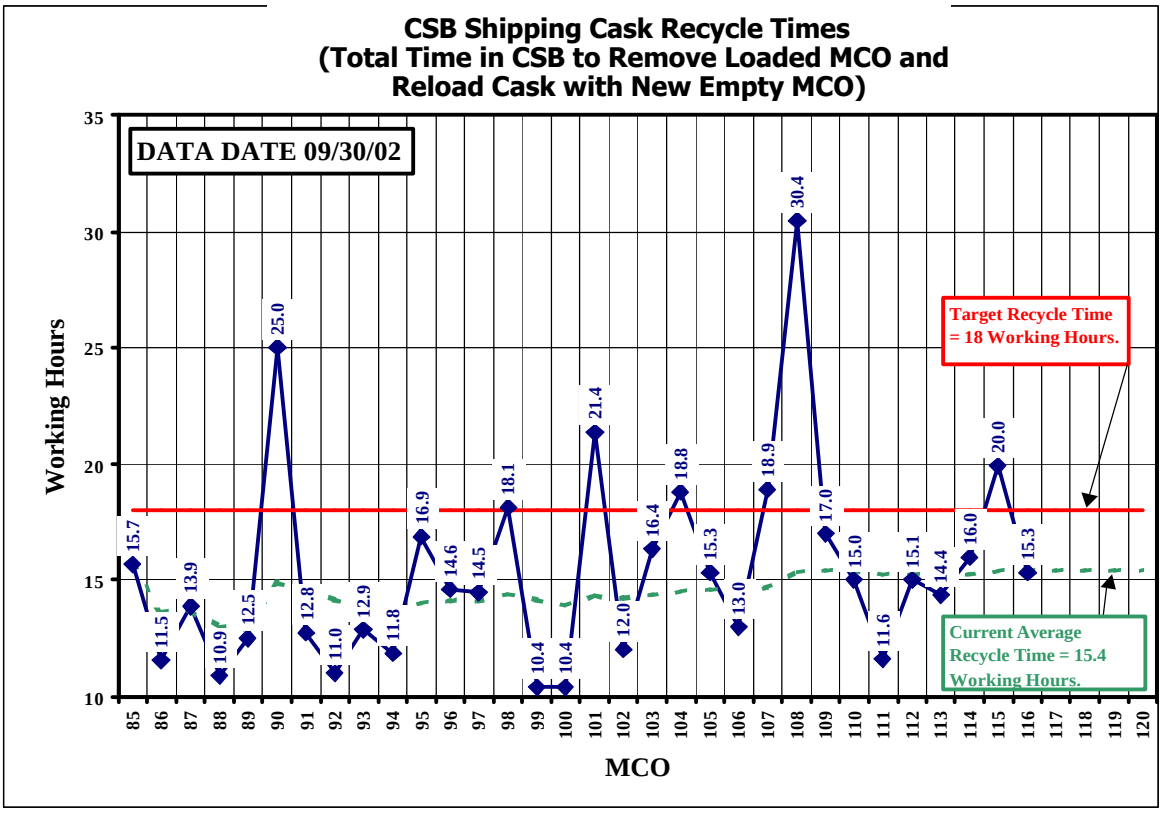
PERFORMANCE OBJECTIVES (CONTINUED)





PERFORMANCE OBJECTIVES (CONTINUED)





PERFORMANCE OBJECTIVES (CONTINUED)

EXPECTATION: Move Sludge and Water from K Basins

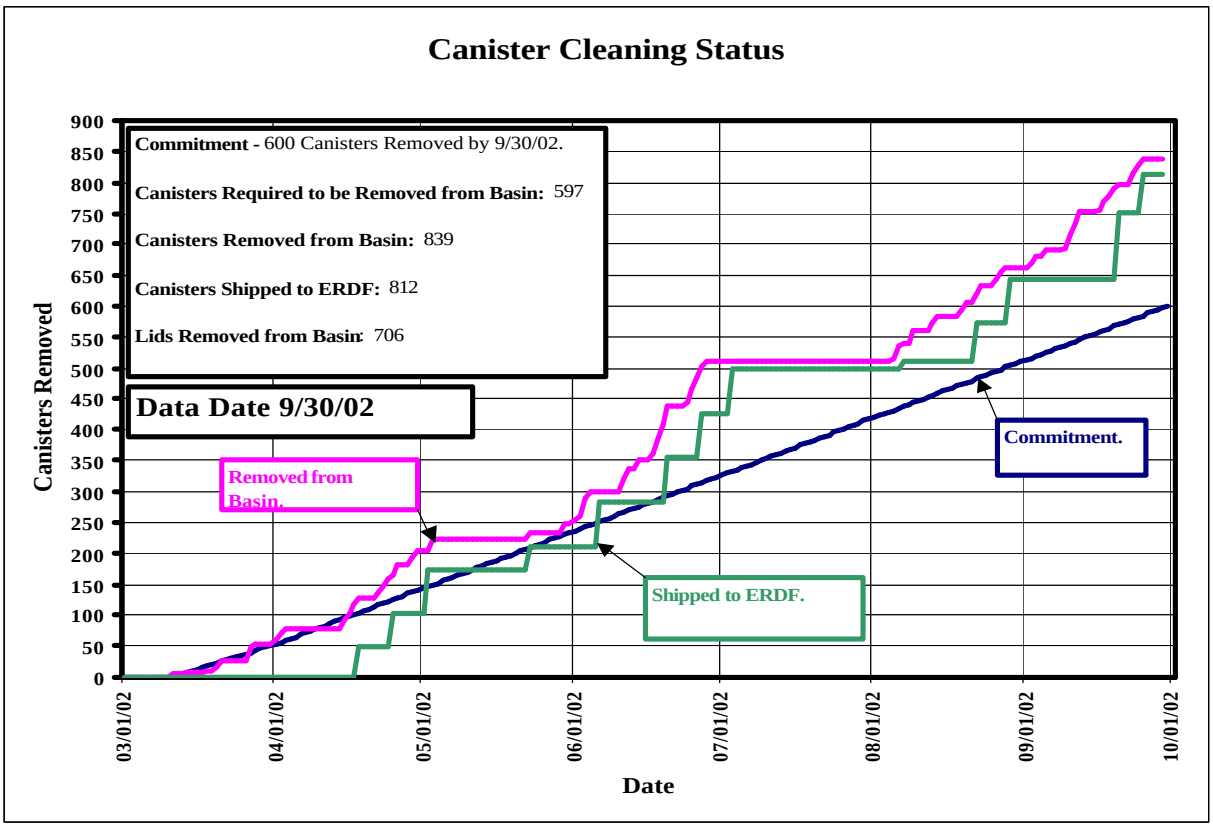
Initiate Sludge Movement by December 31, 2002.

Status: ?Current forecast is February 13, 2003. Continue to work with subcontractors to expedite delivery of LDC, Cask and Trailer (last unit to be delivered by October 28, 2002). Complete Acceptance Test Procedures (ATP) by November 15, 2002 and Operational Test Procedures by November 26, 2002. T Plant Cask and LDC Dry Run forecast December 1, 2002 [T-Plant's readiness to receive sludge is in question (M-91-20)].

EXPECTATION: Remove canisters from K Basins

Remove 600 canisters from KW by fiscal year end.

Status: A total of 839 canisters and 706 lids have been cleaned fiscal year-end to date and 812 canisters were shipped to ERDF. The SNF project is 239 canisters ahead of schedule.



Consolidate Non-Production Reactor Fuel

EXPECTATION: Consolidate site-wide non-production reactor fuel in 200 Area

Move .02 MTHM in fiscal year 2002.

Status: Three shipments of LWR fuel (four cumulatively) were received from the 324 Building and placed on a storage pad at the 200 Area ISA. The first three of 18 shipments of Shippingport Reactor SNF were received and dried at T-Plant, and shipped for safe storage at the CSB.

SCHEDULE / COST PERFORMANCE – ALL FUND TYPES
FY TO DATE STATUS ($000)

		FYTD							
	By PBS	BCWS	BCWP	ACWP	SV	%	CV	%	BAC
PBS RS03 WBS 3.2.3.1	SNF Project, 100 K Basins	$ 119,281	117,136	$ 133,292	$ (2,145)	-2%	$ (16,156)	-14%	$ 119,281
PBS RS03 WBS 3.2.3.2	Canister Storage Building (to2004)	$ 10,673	$ 10,804	$ 10,434	$ 131	1%	$ 370	3%	$ 10,673
PBS RS03 WBS 3.2.3.3	200 Intrim Storage Area (to2004)	$ 2,935	$ 2,636	$ 1,663	$ (299)	-10%	$ 973	37%	$ 2,935
PBS RS03 WBS 3.2.3.4	SNF Project Management and Support	$ 40,239	$ 40,187	$ 36,295	$ (52)	0%	$ 3,892	10%	$ 40,239
	Total	$ 173,128	$ 170,763	$ 181,684	$ (2,365)	-1%	$ (10,921)	-6%	$ 173,128

FY TO DATE SCHEDULE / COST PERFORMANCE

The SNF FYTD unfavorable schedule variance is primarily driven by the following areas that are behind: SWS construction/procurement, FRCO Operation Support, MCO fabrication and T-Plant type 2 (wet). The unfavorable cost variance is primarily driven by additional scope in FTS construction/engineering, SWS engineering and construction, Facility maintenance/operations and Fuel Removal.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, FYTD Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

Schedule Variance Analysis: (-$2.4M)

3.2.3.1 SNF Project, 100K Area (-$2.1M)
Description /Cause: The unfavorable 2 percent schedule variance is primarily due to emergent work in SWS.
Impact: None to report.
Corrective Action: None required.

3.2.3.3 200 Area Interim Storage (-$0.3M)
Description /Cause: The unfavorable 10 percent schedule variance is primarily due to delays in the transfer of PWR Core.
Impact: None to report.
Corrective Action: None required.

Cost Variance Analysis: (-$10.9M)

3.2.3.1 SNF Project, 100K Area (-$16.2M)

Description /Cause: The unfavorable 14 percent cost variance is primarily due to emergent work in FTS and SWS and actual labor rates being higher than planned..

Impact: None to report.

Corrective Action: None required.

3.2.3.3 200 Area Interim Storage (+$1.0M)

Description /Cause: The favorable 37 percent schedule variance is primarily due to delays in the transfer of PWR Core, transloading and Fast Flux Test Facility (FFTF) activities.

Impact: None to report.

Corrective Action: None required.

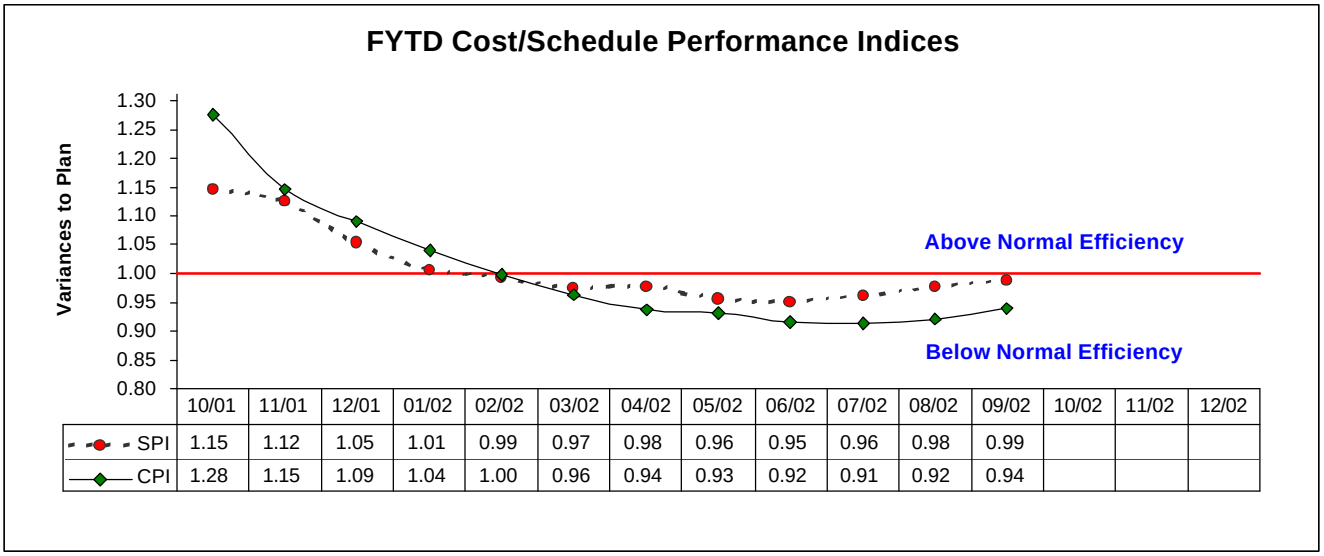
3.2.3.4 SNF Project Management and Support (+$3.9M)

Description/Cause: The favorable 10 percent cost variance is due to FY 2001 underruns in the infrastructure support account and project direction.

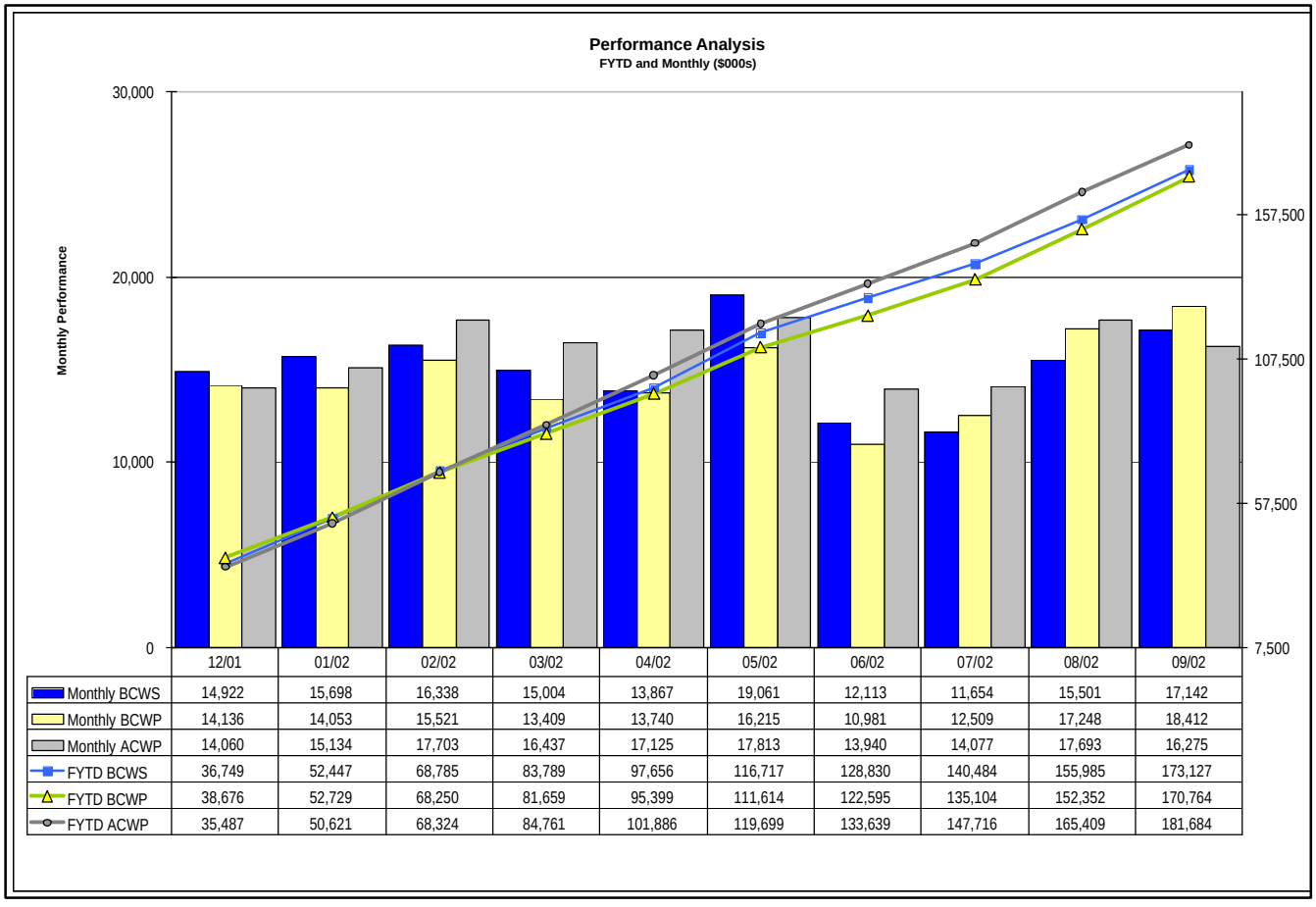
Impact: None to report.

Corrective Action: None required.

Schedule / Cost Performance (Fiscal Year to Date and Monthly)



	10/01	11/01	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02	10/02	11/02	12/02
SPI	1.15	1.12	1.05	1.01	0.99	0.97	0.98	0.96	0.95	0.96	0.98	0.99			
CPI	1.28	1.15	1.09	1.04	1.00	0.96	0.94	0.93	0.92	0.91	0.92	0.94			



	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02
Monthly BCWS	14,922	15,698	16,338	15,004	13,867	19,061	12,113	11,654	15,501	17,142
Monthly BCWP	14,136	14,053	15,521	13,409	13,740	16,215	10,981	12,509	17,248	18,412
Monthly ACWP	14,060	15,134	17,703	16,437	17,125	17,813	13,940	14,077	17,693	16,275
FYTD BCWS	36,749	52,447	68,785	83,789	97,656	116,717	128,830	140,484	155,985	173,127
FYTD BCWP	38,676	52,729	68,250	81,659	95,399	111,614	122,595	135,104	152,352	170,764
FYTD ACWP	35,487	50,621	68,324	84,761	101,886	119,699	133,639	147,716	165,409	181,684

FUNDS MANAGEMENT – FY 2002 TO DATE
FUNDS VS ACTUALS ($000)

	FH Funds Reallocation	September Actuals	Variance
3.2.3 Spent Nuclear Fuel			
RS03			
Project Completion - Operating	**$ 176,945**	**$ 181,683**	**$ (4,738)**
			0
Total	**$ 176,945**	**$ 181,683**	**$ (4,738)**

Status through 9/30/2002

ISSUES

Technical Issues

Issue: MCO number 63 did not pass its integrity test.
Corrective Actions: The disposition of MCO #63 was established as a top priority by the Requirements Improvement Team. This high priority designation has resulted in an agreed path forward by RL and FH to obtain necessary approvals that will support shipment of the MCO to the CSB by October 8, 2002.
Impact: Negative impact toward meeting fuel movement commitments.

Issue: Equipment reliability continues to be a major focus for sustaining fuel movement.
Corrective Actions: A number of Fluor consultant recommendations have been incorporated into the KW manipulator repair program, and have resulted in maintenance staff-hour savings. A Reliability, Availability, Maintainability (RAM) Engineering Group is being formed within the Engineering organization to apply similar analyses to other, high-priority equipment.
Impact: Continued equipment failures may negatively impact meeting fuel movement commitments.

Issue: Production schedule improvement.
Corrective Actions: Continue to work with RL to gain approval to implement breakthrough initiatives identified by the Requirements Improvement Team.
Impact: The SNF Project's production rate must increase in order to meet the December 30, 2002 fuel movement milestone date.

Issue: FTS construction completion and initiate fuel transfer.
Corrective Actions: Section 1B of the Construction Completion Document was signed off as complete September 12, 2002, completing the milestone M-34-29. The contractor ORR began September 25, 2002 and will be complete October 10, 2002. DOE ORR is scheduled to commence October 28, 2002.
Impact: FTS milestone scheduled for completion March 31, 2002, was completed September 12, 2002. No impact to the milestone to begin FTS operations by November 30, 2002.

ISSUES (CONTINUED)

Issue: SWS Schedule Delays.

Corrective Actions: ?Current forecast for completion of M-34-08 is February 13, 2003. Continue to work with subcontractors to expedite delivery of LDC, Cask and Trailer. Complete Acceptance Test Procedures and Operational Test Procedures by November 2002. T Plant Cask and LDC Dry Run forecast December 1, 2002 [T-Plant's readiness to receive sludge is in question].

Impact: The December 31, 2002 milestone to begin sludge removal from the KE Basin (M-34-08) is forecast for completion by February 13, 2003.

Regulatory, External, and DOE Issues and DOE Requests

None to report.

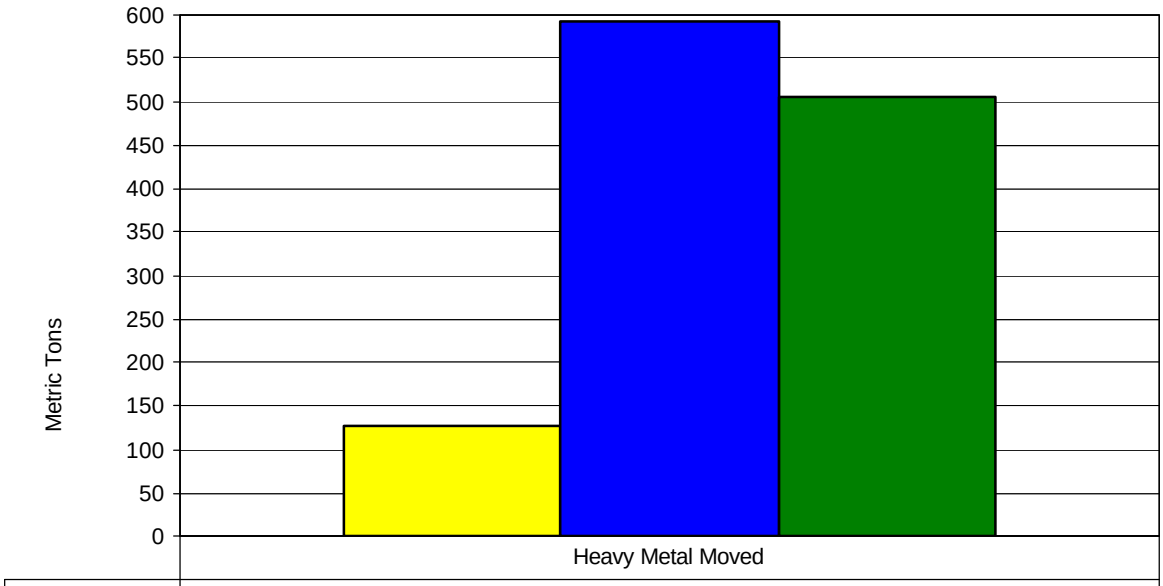
BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

Baseline Change Log

BCR No./ Level 4 WBS	Date Originated	Description	Impact		Date Approved	Status
			Days	Dollars ($000s)		
RS03-2002-013	9/25/02	Delete TIP milestone 510-99-950-Select pool decontamination method	0	0		Submitted to Baseline Review Board (BRB) for consideration and approval.

Heavy Metal Moved

SNF Moved to Dry Storage



	Heavy Metal Moved
FY01 Actual	127
FYTD Planned	593.2
FYTD Actual	504.83

Heavy Metal Moved: During the period July 1, 2002 – September 3, 2002, the SNF Project shipped 43 MCOs, two more than scheduled, and 264.70 MTHM of fuel, 55.26 MTHM more than scheduled. This substantial productivity improvement was the result of steps taken to improve equipment reliability, processing times and process management. These improvements culminated in the project going from 63 days behind schedule on July 14, 2002, to 39 days behind schedule on September 30, 2002. The project continues to focus on improvements and has established a Requirements Improvement Team which identified thirteen initiatives that can improve fuel removal and conditioning process times.